

Name _____

Geometry Worksheet – Radicals A
Simplifying Radicals with Whole Numbers

Simplify each radical completely.

1) $\sqrt{96} =$

1) _____

2) $\sqrt{108} =$

2) _____

3) $\sqrt{715} =$

3) _____

4) $\sqrt{245} =$

4) _____

5) $\sqrt{252} =$

5) _____

6) $\sqrt{768} =$

6) _____

7) $\sqrt{300} =$

7) _____

8) $\sqrt{891} =$

8) _____

9) $\sqrt{2475} =$

9) _____

10) $\sqrt{1183} =$

10) _____

Name _____

Geometry Worksheet – Radicals C

Simplifying Radical Expressions

Simplify the following radicals by using the following rules:

I. Take out all perfect squares from under the radical, other than 1, that are factors

II. No fractions under the radical

III. No radicals in the denominator

1. $\frac{\sqrt{32}}{\sqrt{2}} =$ _____ 2. $\frac{\sqrt{56}}{\sqrt{7}} =$ _____ 3. $\frac{\sqrt{2}}{\sqrt{5}} =$ _____ 4. $\frac{\sqrt{5}}{\sqrt{2}} =$ _____

5. $\frac{\sqrt{16}}{\sqrt{7}} =$ _____ 6. $\pm\sqrt{\frac{9}{25}} =$ _____ 7. $\sqrt{\frac{2}{98}} =$ _____ 8. $\sqrt{\frac{1}{20}} =$ _____

9. $\sqrt{\frac{5}{4}} \cdot \sqrt{\frac{1}{5}} =$ _____ 10. $\sqrt{\frac{2}{9}} \cdot \sqrt{\frac{1}{2}} =$ _____ 11. $\sqrt{\frac{1}{2}} \cdot \sqrt{\frac{2}{5}} =$ _____

12. $\sqrt{320} =$ _____ 13. $\sqrt{x} \cdot \sqrt{x} =$ _____ 14. $\sqrt{3R} \cdot \sqrt{3R} =$ _____

$$15. \sqrt{\frac{81}{324}} = \underline{\hspace{2cm}} \quad 16. \sqrt{\frac{27}{8}} = \underline{\hspace{2cm}} \quad 17. \sqrt{\frac{8}{27}} = \underline{\hspace{2cm}} \quad 18. -\sqrt{\frac{12}{9}} = \underline{\hspace{2cm}}$$

$$19. -\sqrt{\frac{16}{64}} = \underline{\hspace{2cm}} \quad 20. \frac{\sqrt{6}}{\sqrt{3}} = \underline{\hspace{2cm}} \quad 21. \pm \frac{\sqrt{6}}{\sqrt{4}} = \underline{\hspace{2cm}} \quad 22. -\frac{\sqrt{6}}{\sqrt{5}} = \underline{\hspace{2cm}}$$

$$23. \frac{\sqrt{6}}{\sqrt{8}} = \underline{\hspace{2cm}} \quad 24. \frac{\sqrt{6}}{\sqrt{5}} = \underline{\hspace{2cm}} \quad 25. \frac{\sqrt{1}}{\sqrt{7}} = \underline{\hspace{2cm}} \quad 26. \frac{5}{\sqrt{5}} = \underline{\hspace{2cm}}$$

$$27. \frac{7}{\sqrt{7}} = \underline{\hspace{2cm}} \quad 28. \frac{\sqrt{40}}{\sqrt{88}} = \underline{\hspace{2cm}} \quad 29. \frac{\sqrt{56}}{\sqrt{21}} = \underline{\hspace{2cm}} \quad 30. \pm \frac{\sqrt{1}}{9} = \underline{\hspace{2cm}}$$